

**DISTRICT V ADVISORY BOARD
AGENDA**

**June 9, 2004
7:00 p.m.**

**Auburn Hills Golf Course Clubhouse
443 S. 135th West**

ORDER OF BUSINESS

Call to Order

Approval of Minutes for May 3, 2004

Approval of Agenda for June 9, 2004

Public Agenda

This portion of the agenda provides an opportunity for citizens to present items not shown as part of the regular meeting agenda.

1. Scheduled items

2. Off-agenda items

Recommendation: Provide comments/assign staff action.

Staff Reports

3. Community Police Report

Community Police Officers for District V will report on specific concerns for beat areas.

Recommended Action: Receive and file

New Business

4. Off-site Billboard Regulation

Kurt Schroeder, Office of Central Inspection, will present issues associated with billboard to obtain guidance and policy direction for City Council regarding off-site billboard signs

Recommended Action: Provide feedback to Council for regulation.

Planning Agenda

5. Zoning Request 2004-00021

Bill Longnecker, Planning, will present a request to change zoning from MF-29, Multi-Family Residential, to "GO," General Office & "LC," Limited Commercial with a Protective Overlay at a location of approximately 760 feet south of Maple & 135th Street West intersection, on the east side of 135th Street West.

Recommended Action: Recommend City Council approval with staff recommendations.

Public Works Agenda

6. Proposed Sanitary Sewer System

Rob Younkin, Public Works, will present a petition to construct a sanitary sewer system along the east side of Byron Street, located south of Douglas & north of Maple between Tyler & Maize Road.

Recommended Action: Recommend advisement to City Council to approve the petition.

7. Traffic Report for Zoo Boulevard/Westdale/I-235 Bypass

Scott Logan, Public Works Traffic Engineering, will present information on the traffic study for this area.

Recommended Action: Receive and file.

Board Agenda

8. Updates, Issues, and Reports

Report on any activities, events, or concerns in the neighborhoods and/or District V.

DAB V Workshop – Tuesday, June 22, 7:00 p.m. at Auburn Hills Clubhouse

Public Meeting for Flood Control Update – Thursday, July 8, 7:00 p.m. at Sedgwick County Extension Center, 21st & Ridge Road

Council Member Martz

- Issues/updates

DAB Members

- Other concerns/issues/updates

Recommended Action: Address each item, as appropriate.

Next Meeting

The next meeting for District Advisory Board V will be scheduled at Auburn Hills Clubhouse at **7:00 p.m. on July 12** due to the July 5 Holiday.

Adjournment

**City of Wichita
District V Advisory Board Meeting
June 9, 2004**

TO: City Council Member Martz
District V Advisory Board Members

SUBJECT: Off-Site Billboard Regulation

INITIATED BY: City Council

AGENDA: New Business/Staff Presentations

Recommendations: Provide the City Council with guidance and policy direction for off-site billboard signs.

Background: Recently, several large off-site billboard signs have been legally permitted and erected in locations that have generated a significant number of citizen and neighborhood association complaints and concerns. These signs were near residential areas and surrounded by commercial and office development that was also controlled by zoning protective overlays such as Community Unit Plans and/or Planned Unit Developments (further restricting underlying zoning for both allowed uses and aesthetics). Permit approvals were granted based on compliance with all Sign and Zoning Code requirements controlling the placement and location of off-site billboard signs.

Due to the number of complaints received about the above-referenced billboard signs, the City Council passed a four-month “**MORATORIUM ON THE PROCESSING OF CERTAIN OFF-SITE SIGN PERMITS**” (see attached) at its May 4, 2004 Council meeting. The 4-month moratorium allows time to conduct a study of billboard sign regulations, to obtain public comment on current or proposed billboard sign regulations, and to develop and adopt any appropriate Sign or Zoning Code amendments relating to off-site billboard signs.

On May 4, Council also directed staff to: (1) prepare a workshop agenda item for May 25, 2004; (2) present the issues to DABs as soon as possible to receive their input; and (3) return to City Council in a subsequent workshop prior to drafting proposed new Sign and/or Zoning Code regulations for formal Metropolitan Area Planning Commission review/recommendation and final City Council approval.

Analysis: There are approximately 300 existing off-site billboard signs located within Wichita. A significant number of these signs are 25-30+ years old. Many of these signs were on lots annexed into the City over the past 30 years, and were installed in the County when there were no County off-site sign regulations. Many existing billboard signs are therefore “legally non-conforming” to current City standards/regulations.

On May 25, 2004, staff presented a summary of billboard regulation/issues and current billboard status/locations to the City Council in a Council workshop. During the workshop presentation, the Council directed staff to present similar information to the DABs, and to obtain input about off-site billboard regulation, along with any general suggestions for amendments to current Sign Code or Zoning Code requirements. A “Summary of Off-Site Billboard Regulations” is attached for DAB review.

Recommendation/Actions: It is recommended that the DABs provide input about off-site billboard regulation for City Council review.

Summary of Off-Site Billboard Regulations

Zoning Classification Requirements

Zoning classification where allowed:	“LC” Limited Commercial, “GC” General Commercial, “LI Limited Industrial” or “GI General Industrial”.
Zoning overlay restrictions per UZC:	<ul style="list-style-type: none">- Not allowed by UZC in approved CUPs.- May be allowed in zoning POs associated with a rezoning request, depending on approved conditions or general requirements.- May be allowed in approved PUDs depending on approved conditions or general requirements.- Allowed in Delano Overlay District with design review approval.- Allowed in Old Town Overlay to advertise overlay district businesses/events.- Airport Overlay Hazard Areas may restrict certain locations near airports.
Other potential overlay restrictions:	<ul style="list-style-type: none">- Since these signs are considered structures, flood hazard zones may also restrict certain locations.- Historic districts and required historic environs reviews may also restrict certain locations.

Sign Code - Allowed Size and Height

Maximum sign face size:	825 square ft. <i>including</i> allowed extensions outside rectangular sign face.
Max. sign face rectangular dimension:	48’ wide by 14’ high (672 square ft.).
Max. sign height above grade:	30 ft.
<i>Exceptions to height:</i>	<p>Top of sign may be 14’ above rail/barrier of an adjacent elevated roadway/highway (or up to 20’ with zoning administrative adjustment).</p> <p>Top of sign may be 8’ above a roof or roof parapet of single story building when the sign is located within three ft. of a building, or if the sign is cantilevered over the building.</p>

Sign Code - Prohibited Locations

- No closer than 660’ from the sign to the bank lines of the Big or Little Arkansas Rivers.
- No closer than 660’ K-96 Highway right-of-way from I-135 to the east City limits.

- No closer than 660' from the sign to any park or recreation area under the jurisdiction of any public body including the Board of Park Commissioners of the City of Wichita.
- No closer than 330' from any other off-site billboard sign facing the same direction of travel along the same street frontage (measured from points at street that are perpendicular to the center of each sign).
- Within required minimum building zoning district classification or platted setbacks for the zoning lot on which the sign is located (whichever is greater).
- Mounted on the roof of a building.
- If erected on "GC", "LI" or "GI" zoning lot, no closer than 50' from the sign to a residential structure (primary or accessory structure). If erected on an "LC" zoning lot, no closer 150' (measured perpendicular to the sign face) or no closer than 75' (measured parallel to the sign face) to a residential structure (primary or accessory structure; the perpendicular measurement shall extend forty-five degrees to either side of the perpendicular line).
- No off-site sign shall be located on any "LC" zoning lot that is not part of at least 300' continuous linear feet of commercial or industrial zoning ("continuous" is measured with lot zoning extended to street centerline).

Sign Code – Maximum Number in Mile

Notes: *A mile section is the approximate mile between arterial mile line roads. For purposes of measurement and maximum number of off-site signs allowed within a given mile, only those signs that face the direction of travel are counted.*

LC zoning shall not be considered for linear measurement purposes unless the LC zoning is adjacent to an arterial street or expressway.

When located on LC lots:

At least 1,500 linear feet of commercial or industrial zoning within the mile to get the first off-site sign on an "LC" zoned lot (NOTE: While off-site signs are NOT allowed in CUPs, underlying zoning within CUP is counted in the minimum linear zoning calculation).

When at least 3,000 linear feet of commercial or industrial zoning within the mile, a second off-site sign on an "LC" zoned lot may be approved (NOTE: While off-site signs are NOT allowed in CUPs, underlying zoning within CUP is counted in the minimum linear zoning calculation).

When at least 4,500 linear feet of commercial or industrial zoning within the mile, a third off-site sign on an "LC" zoned lot may be approved (NOTE: While off-site signs are NOT allowed in CUPs, underlying zoning within CUP is counted in the minimum linear zoning calculation).

When located on GC, LI or GI lots:

No more than one off-site sign facing a direction of travel for each 500 linear feet of street having GC, LI or GI zoning adjacent thereto. No more than five in a mile for adjacent GC or LI zoning, and no more than eight in a mile for GI zoning.

STAFF REPORT

MAPC May 20, 2004

DAB V June 9, 2004

CASE NUMBER: ZON2004-00021

APPLICANT/AGENT: West Wichita Development Inc. (Owner/Applicant);
Baughman Company, PA c/o Terry Smythe (Agent)

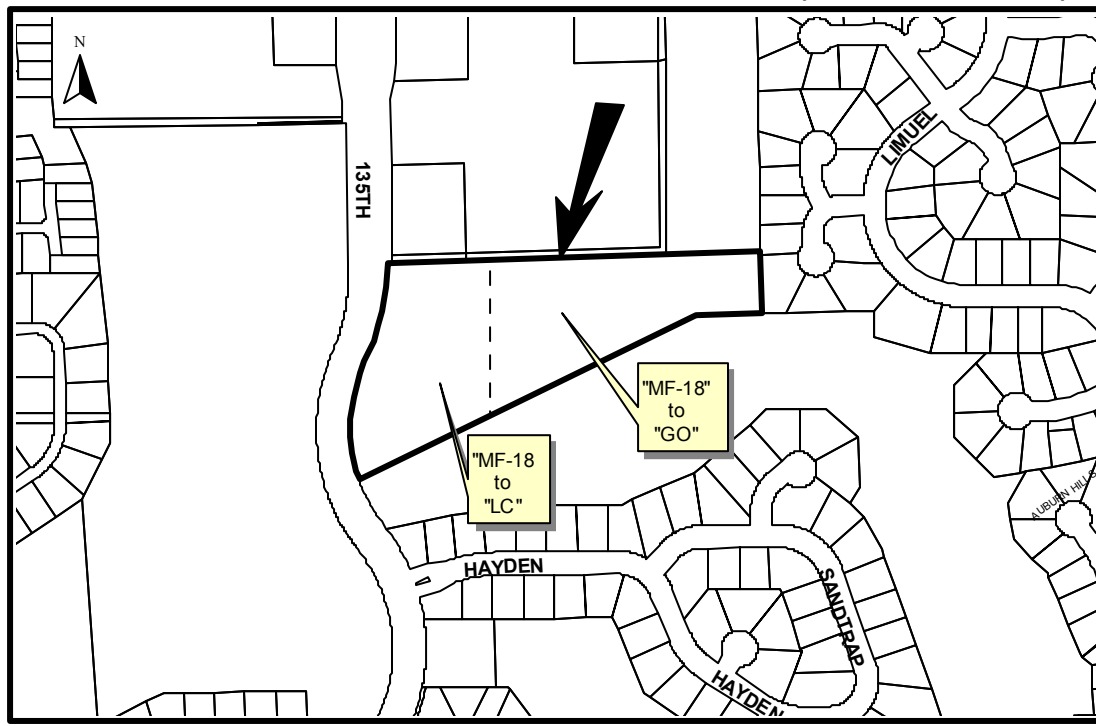
REQUEST: "GO" General Office & "LC" Limited Commercial with a
Protective Overlay

CURRENT ZONING: "MF-29" Multi-Family Residential

SITE SIZE: 8.6-acres

LOCATION: Approximately 760-feet south of the Maple Street – 135th Street
West intersection, on the east side 135th Street West

PROPOSED USE: Provide limited commercial development & an office park



BACKGROUND: The applicant requests a zone change from “MF-29” Multi-family Residential to “LC” Limited Commercial (3.9-acres) and “GO” General Office (4.7-acres) with a Protective Overlay (PO) on the 8.6-acre Auburn Hills 7th Addition subject site. The subject site has frontage on 135th Street West and is approximately 760-feet south of the Maple Street – 135th Street West intersection, on the east side of 135th Street West. The proposed “LC” portion of the site would be located along the 135th Street West frontage and the proposed “GO” zoning would be on the site’s east side abutting single-family residences.

The subject site is located west of the previously mentioned established single-family residential subdivision (Auburn Hills 3rd Addition, houses built through the mid 1990s to 2000) and south of a developing commercial center (DP-219, the Auburn Hills C.U.P.), anchored by a Safeway, and undeveloped neighborhood retail. The undeveloped neighborhood retail has a Protective Overlay, PO#130, on it. The Auburn Hills Golf Course is located south and west, across 135th Street West, of the subject site.

This site, along with the other corners of the Maple and 135th Street intersection are covered by the Far West Side Commercial Development Policy, which intended to limit this intersection to 24-acres of nonresidential development, with no more than 12-acres of nonresidential development per corner. This policy also recommended development standards that included; signage be low, small and monument style, that there be architectural compatibility within developments and that commercial developments should be compatible with surrounding residential uses. The intersection has already exceeded the recommended 24-acres of nonresidential development, with a current total of approximately 31.41-acres of approved commercial zoning, but otherwise has established development guidelines that comply with the west side development policy. The proposed zoning change would bring the total non-residential zoned properties at the intersection up to approximately 40-acres, with approximately 25-acres of it located on this southeast corner of the intersection. The applicant’s proposed PO complies with the west side development policy; in fact it almost mirrors the provisions of DP-219, the Auburn Hills C.U.P. The difference is that the proposed PO is more restrictive in the uses allowed and signage, but does not restrict the total square footage of buildings allowed on the subject site. The creation of the Far West Side Commercial Development Policy was triggered by the DP-219 application.

CASE HISTORY: The subject site was recorded as the Auburn Hills 7th Addition, February 24, 1999.

ADJACENT ZONING AND LAND USE:

NORTH:	“LC”	Developing commercial, a grocery store
	“NR”	Not developed
SOUTH:	“SF-5”	Golf course
EAST:	“SF-5”	Single family residential
WEST:	“SF-5”	Golf course

PUBLIC SERVICES: The site has frontage along 135th Street West. 135th Street West is classified as a 4-lane arterial and is currently an improved arterial with four lanes and a center turn lane. Current average daily trips (ADT) are 1,620 ADTs south of the intersection, with projected

traffic volumes for 2030 were estimated at 6,800 ADTs. However, it is predicted that if the northwest bypass were to be constructed, traffic volumes would more likely be in the 9,000 to 10,000 ADT range. No improvements are scheduled on the city or county capital improvements program for 135th Street West. Water and sewer and franchised utilities are available.

CONFORMANCE TO PLANS/POLICIES: The Land Use Guide of the Comprehensive Plan identifies this area as appropriate for “High Density Residential” development. The proposed “LC” and “GO” zoning with the PO would prohibit retail activity involving automobile oriented businesses such as drive through and curb side restaurants, car washes, convenience stores and service stations, plus private clubs and taverns, i.e. businesses that have the possibility of producing a lot of noise and traffic. The proposed zoning change with the PO encourages office development and other complementary land uses that serve and are generally appropriate near residential neighborhoods.

The Far West Side Commercial Development Policy, adopted by the City Council in 1996, indicates that the scale of commercial development at the intersection of Maple and 135th Street West should be limited to a total of 24 acres for all four corners and a maximum of 12 acres at any one corner. As previously stated, this intersection (and this corner) has already surpassed that recommended nonresidential zoning/development total. The Far West Side Commercial Development Policy also recommends that the appearance of commercial development should have certain characteristics in terms of signage, lighting, landscaping, shared internal access and architectural design. The proposed zone change with the PO does meet the development characteristics criteria.

RECOMMENDATION: The staff feels the zoning request for “LC” and “GO” with the PO meets the intent of the Far West Side Commercial Development Policy, with the exception of it’s adding to the nonresidential acreage at the 135th Street West – Maple intersection and at this southeast corner. The total nonresidential acreage at the intersection is currently approximately 31-acres, thus exceeding the policy’s recommended 24-acre total. The total nonresidential acreage at the southeast corner of the intersection is currently approximately 16.5-acres, thus exceeding the policy’s recommended 12-acre total. The proposed zone change would bring the total nonresidential acreage at the intersection to approximately 40-acres and total nonresidential acreage at the southeast corner of the intersection to approximately 25-acres. The Auburn Hills Golf course will prevent any more expansion of nonresidential development at this corner of the intersection. There is one undeveloped section of property left to be developed at this intersection on its northwest corner. The approximately 10-acre “SF-5” zoned property abuts the north side of the “GO” zoned sites at this northwest corner and it is conceivable that a future zone change request could be applied for, thus increasing total nonresidential zoning at the intersection to approximately 50-acres; more than doubling the Far West Side Commercial Development Policy’s recommended 24-acre total and exceeding the recommended acreage for the northwest corner. If denial of the current zone change request were considered, it would seem to be on the basis of adding to the already exceeded total nonresidential acreage at this intersection. If this current zone change request is approved it could open the possibility of the last remaining undeveloped property at the intersection applying for nonresidential zoning at some time in the future. However based on the current development patterns at the intersection, staff would probably support a future zone change, as long as it met the development standards established by current zoning and their overlay districts.

Based upon the information available prior to the public hearings, planning staff recommends that the request be APPROVED, with Protective Overlay #140 as presented by the applicant.

This recommendation is based on the following findings:

1. The zoning, uses and character of the neighborhood: Property in the neighborhood is zoned either “GO” “NR” or “LC” on the four corners of the Maple Street – 135th Street West intersection; all have either a Community Unit Plan overlay or a Protective Overlay on the non-residential zoning. Beyond the intersection, the neighborhood is predominately zoned “SF-5”, with the exception of some “TF-3” two-family residential zoned property. The character of the neighborhood is that of a developed and developing suburban residential neighborhood that has displaced the prior agricultural uses of the area. These residential areas abut the non-residential zoning at the intersection of Maple and 135th Street West, which is developed or developing with office, medical services and retail. The golf course is another prominent feature of the area, which in this case offers a buffer between the proposed zoning and the established residential development south of the subject site.
2. The suitability of the subject property for the uses to which it has been restricted: The subject property is zoned “MF-29” Multi-family Residential and could be developed as zoned, with all permitted residential development abutting the golf course.
3. Extent to which removal of the restrictions will detrimentally affect nearby property: Detrimental affects on residential properties in the area would be minimized by the Protective Overlay, which would address setbacks, screening, access, design, and should limit noise, lighting, and other activity from adversely impacting residential properties. The proposed PO also prohibits retail activity involving automobile oriented businesses such as drive through and curb side restaurants, car washes, convenience stores and service stations, plus private clubs and taverns, i.e. businesses that have the possibility of producing activity that typically is more disruptive to adjacent residential development.
4. Conformance of the requested change to the adopted or recognized Comprehensive Plan and policies: The Land Use Guide of the Comprehensive Plan identifies this area as appropriate for “High Density Residential” development. The proposed “GO” and “LC” zoning with the proposed PO would accommodate retail that would be less disruptive to adjacent residential development and office development and other complementary land uses that serve and are generally appropriate near residential neighborhoods.
5. Impact of the proposed development on community facilities: No detrimental impacts on community facilities are anticipated.

**City of Wichita
District V Advisory Board Meeting
June 9, 2004**

TO: City Council Member
District Advisory Board Members

SUBJECT: Petition to construct a Sanitary Sewer to serve an area on the east side of Byron, south of Douglas

INITIATED BY: Public Works

AGENDA: New Business

Recommendations: Approve the Petition.

Background: Property owners on South Bryon have filed a petition for the City to construct sanitary sewer. The area is on the east side of Bryon Street, located south of Douglas & north of Maple, between Tyler & Maize Road. The signatures on the petition represent 4 of 6 (66.67%) resident owners and 66.67% of the improvement district area. Property owners at 120, 150, & 200 S. Bryon are designated in the improvement district.

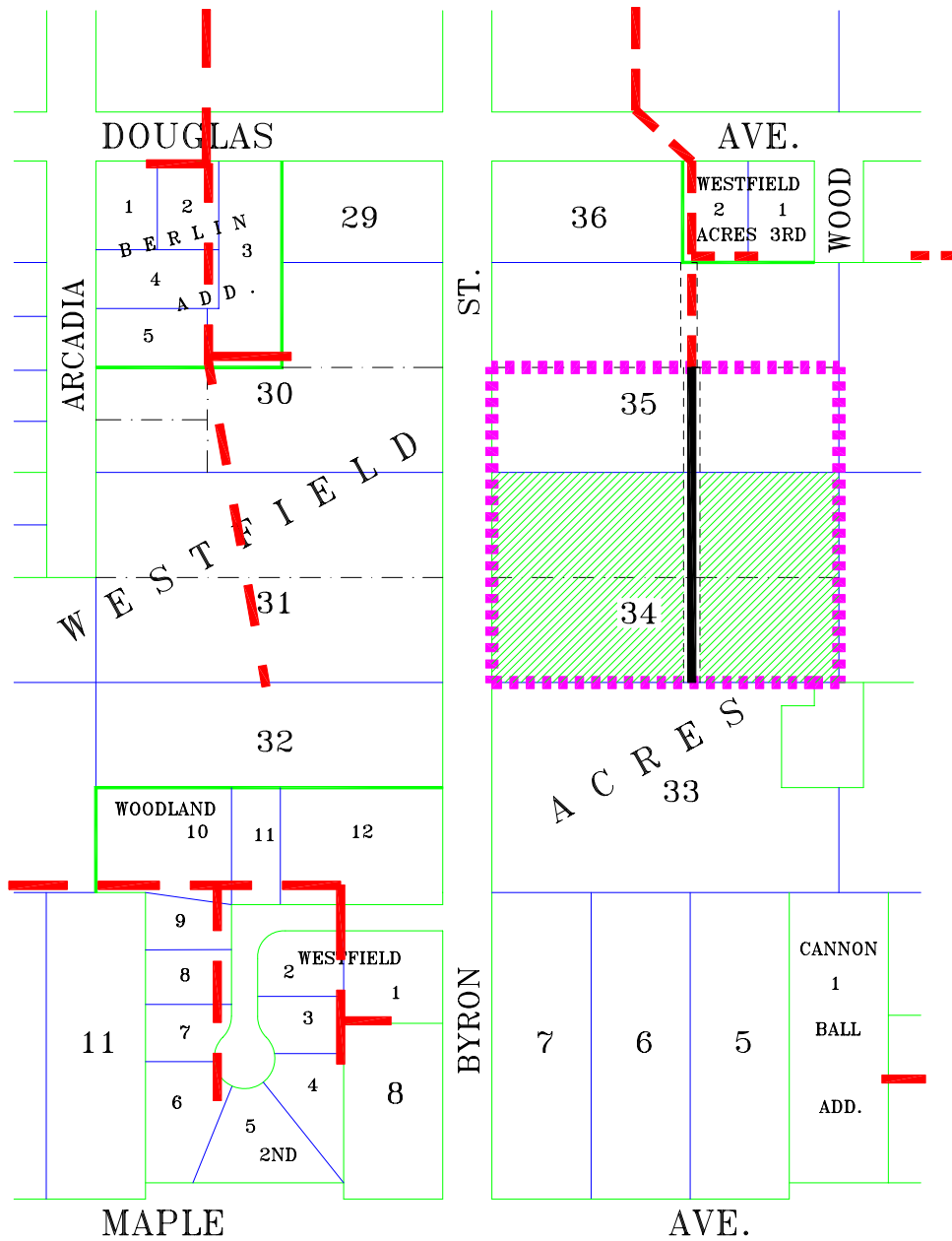
Analysis: The project will extend City sewer service to an area on the east side of Byron, south of Douglas. The area is currently served by private septic tank systems.





Financial Considerations: The estimated cost of the project is \$30,000 with the total assessed to the improvement district area. The proposed method of assessment is the *square foot basis*. The estimated assessment to individual properties is \$00.184 per square foot of ownership.

Legal Considerations: State Statutes provide that a petition is valid if signed by more than a majority of resident property owners or by owners of the majority of the property in the improvement district.

Recommendation/Actions: It is recommended that the District V Advisory Board recommend approval of the petition.

PROPOSED SEWER LINE TO SERVE 120, 150 AND 200 S BYRON



IMPROVEMENT DISTRICT 
 PROPOSED SEWER LINE 
 EXISTING SEWER LINE 
 AREA SIGNED (66.67%) 
 OWNERS SIGNED (66.67%)

[illegible]

**City of Wichita
District #5 Advisory Board Meeting
June 9, 2004**

TO: City Council Member Martz
District V Advisory Board Members

SUBJECT: Zoo/Westdale/I-235 Traffic Study Report

INITIATED BY: Scott Logan, City Traffic Engineer

AGENDA: June 9, 2004

Recommendations: Recommendations detailed in staff study

Background: Staff has completed a traffic study of the Zoo/Westdale/I-235 intersection to evaluate long and short-range alternatives for mitigating traffic delays and accidents. Traffic flow problems at this intersection have been compounded by significant traffic flow increases generated by new community growth in the northwest Wichita and western suburbs. With this traffic growth, the Zoo/Westdale/I-235 intersection is experiencing traffic flow deficiencies that are impacting traffic safety and efficiency.

Analysis: Staff's evaluation of the traffic flow problems at the Zoo/Westdale/I-235 addresses many deficient conditions that impact motorists. Although staff has sought to provide an uncomplicated approach to addressing the overall traffic problems, it has not been simple. To evaluate the major traffic flow deficiencies at the intersection, staff has provided an analysis for each one of the traffic conditions that detrimentally impacts motorists. Provided is a report of the traffic study including an evaluation of these conditions and a discussion of recommended improvements in the following sections.

1. Improving Traffic Delays
2. Reducing Traffic Accident Rates
3. Lowering Intersection Traffic Volumes
4. Reducing Tie-ups along Zoo between the Signalized I-235 Off-ramps

Financial Considerations: None

Legal Considerations: None

Recommendation/Actions: "It is recommended that the District Advisory Board receive and file staff's Zoo/Westdale/I-235 traffic evaluation report.

Zoo/Westdale/I-235 Traffic Study

Executive Summary

District V Advisory Board – June 9, 2004

Staff has completed a traffic study of the Zoo/Westdale/I-235 intersection to evaluate long and short-range alternatives for mitigating traffic delays and accidents. Traffic flow problems at this intersection have been compounded by significant traffic flow increases generated by new community growth in the northwest Wichita and western suburbs. With this traffic growth, the Zoo/Westdale/I-235 intersection is experiencing traffic flow deficiencies that are impacting traffic safety and efficiency. Listed below are the primary traffic safety and delay problems at the intersection.

1. Long traffic delays on the I-235 off-ramp and Zoo approaches that result in extended traffic backups
2. Higher number of accident experienced at the Zoo/Westdale/I-235 intersection
3. High traffic volumes at the Zoo/Westdale/I-235 intersection.
4. Traffic tie-ups on Zoo beneath the I-235 overpass, between the two I-235 signalized approaches

The major concern of motorists at the Zoo/Westdale/I-235 intersection is the excessive delays on the Zoo and I-235 approaches. Currently, the average motorist delay is 45 seconds at the intersection and the highest delay (58 seconds) is being experienced by motorists on the I-235 ramp approach. The resulting motorist delay on the I-235 ramp approach is seriously impacting conditions by causing vehicular backups, which are encroaching onto the I-235 thru lanes. Although this situation can be improved by reconstructing the I-235 approach and increasing green phase times for this approach, these measures will not significantly improve the overall traffic conditions on the other approaches. To improve overall traffic operations, a more comprehensive approach was undertaken to evaluate the permitted intersection approach movements, signal phase timings, geometric design, and signal coordination.

In this study, staff evaluated approach movement options, which would significantly improve the Zoo/Westdale/I-235 operations. The best solutions were ones that restrict the very minor approach flows that need dedicated traffic signal green time at the intersection. These minor approach flows were ones with traffic volumes under 300 vehicles per hour (VPH) during the peak morning and afternoon periods. Because of the lower flow rates, they receive a much larger proportion of green phase time per the vehicular flow. In this evaluation, the best

alternative was the plan that restricted “lefts” and “through” movements out of Westdale. This phase serves only 19 of the 4,000 motorists, or 1/2 of 1% of the flow entering the intersection during the peak afternoon hour, but receives 8% of the green phase time. This alternative also impacted the least number of motorists, while achieving significant reductions with respect to overall intersection delays during the peak periods.

The signal timing plans were also evaluated at the Zoo/Westdale/I-235 off-ramp to improve overall operations. With only a finite amount of green phase time that can be collectively allocated at the intersection, increasing green phase times for one approach would effectively reduce the time for the other approaches. Therefore, optimizing the signal phase timings by carefully considering the green phase time split given to each of the approaches was a very important factor in this evaluation. With the use of computer modeling of intersection operations and field review, it was determined that the phasing improvements listed below could be implemented.

1. Shorten the green phase times for Zoo
2. Shorten the intersection signal cycle length
3. Extend the green phase time for the I-235 off-ramp approach
4. Eliminate the green phase times for the Westdale “through” and “left turn” movements

The resulting recommended signal timing plan reduces the intersection cycle length by reducing green phase times on all approaches except for the I-235 ramp approach. The resulting green phase times were shortened on the Zoo Boulevard approaches by 5-10 seconds, with the green phase time lengthened on the I-235 approach by 5 seconds. The resulting cycle length for the signal operation was reduced from 180 seconds to 150 seconds and should reduce overall delay for the motorists at the intersection. This plan also eliminates the inefficient phase timings for the Westdale “lefts” and “through” movements. It should be noted that this resulting cycle plan would be very similar to the one that was effectively utilized at the Zoo/Westdale/I-235 ramp this winter during the Westdale construction closure.

More costly construction and revision plans for the Zoo/Westdale/I-235 intersection were also evaluated to improve the capacity and reduce delays. These reconstruction plans addressed the excessive approach delays, and backups on the I-235 off-ramp. The short-term and long-term construction and revision plans that were considered are ones listed on the next page.

- 1. Widen and increase the I-235 southbound off-ramp left-turn storage bays.**
- 2. Construct a dual-right turn lane at the Westdale Street Approach**
- 3. Remove Zoo center medians to construct an additional northbound through lane.**
- 4. Provide Zoo “Bypass” lanes within the K&O rail corridor**
- 5. Construct a new southbound I-235 off-ramp at the northeast quadrant of the I-235/Zoo intersection for motorists destined north to 21st Street and Windmill Road**

Staff recognizes that these higher cost alternatives need to be further studied to evaluate the benefit/cost of each plan. This additional study should be undertaken in cooperation with the Kansas Department of Transportation, since the improvements sought would modify the design and operation of the I-235 ramp approaches. It should also be noted that the “bypass” alternative (#4) is only possible if the K&O railroad abandons their rail corridor along Zoo Boulevard. Discussions with the K&O and BSNF railroads are currently in progress. The costs for these projects would range between \$200,000 and \$5,000,000 to extend new lanes and off-ramp facilities along both Zoo and I-235.

Another long-range alternative for improving traffic flow includes the construction of the 25th Street Floodway bridge. This major bridge facility would effectively shift a portion of the traffic flow on Zoo onto other facilities that would provide less travel time and distances for motorists. This alternate was one discussed in the “Northwest Wichita Traffic Congestion Relief Study” which addressed “build” alternatives that would reduce traffic congestion at the Zoo/Westdale/I-235 intersection.

This study also addressed the other primary concern for motorists, which is the accident experience at the Zoo/Westdale/I-235 intersection. This accident rate has been the focus of staff’s attention since the intersection was identified as having the city’s highest accident rate this year. Both police enforcement and traffic engineering measures have been prioritized at this intersection to lower this accident rate. The enforcement activities have included a higher presence of patrol officers at this intersection to reduce incidents of reckless driving, speeding, and red-light running. The traffic engineering measures have included modifying the signal phase by providing only “protected” left turn phasing on Zoo Boulevard and eliminating the “permissive” left turn phase. This measure effectively reduces the left-turning/head-on accident experience, which was the primary accident type at this Zoo/Westdale/I-235 ramp intersection. Of the 27 accidents occurring the past year, 17 have been of this type. After evaluating the conditions at this

Zoo/Westdale/I-235 intersection, it's realized that motorists may have been misjudging the oncoming motorist speeds and permissible traffic gaps in traffic.

This study also evaluated other traffic conditions that hampered traffic movements at the Zoo/Westdale/I-235 intersection, including conditions that caused the traffic backups on Zoo between the two signalized I-235 ramp intersections. Coordinating the signalized operations has effectively reduced the traffic backup conditions between the two Zoo intersections. Currently, traffic signal coordination plans call for initiating a red signal phase for the northbound Zoo traffic at the north I-235 intersection at strategic periods when gaps normally occur in the northbound Zoo traffic flow. However, with increasing traffic growth, long-term plans should be evaluated to reduce the potential for this problem. These long-term improvements would include eliminating the signalized operations at the north ramps by constructing a new I-235 ramp intersection approach on the Northeast quadrant. This new I-235 ramp would serve freeway traffic that is headed northbound on Zoo to Windmill Road or 21st Street.

It should be noted that staff did not consider an alternate measure to close the Westdale approach to improve conditions at the Zoo/Westdale/I-235 intersection. This was not considered since it would result in major traffic flow impacts and would jeopardize transportation access needs within the neighborhood areas surrounding Westdale Drive and the Zoo Boulevard. Staff did evaluate the traffic flow impacts when the Westdale approach at the Zoo/Westdale/I-235 intersection was temporarily closed during the winter period to install water main infrastructure for the 66" Raw Water Project. This closure resulted in major traffic flow diversions on West Street that impacted two other major intersections, 13th/West and 13th/Zoo. Traffic flow was significantly increased on Zoo with volumes increasing by 40% along the through lanes.

Recommended Improvements

The recommended improvements for the Zoo/Westdale/I-235 intersection were ones selected to best improve motorist operations, with respect to safety and delay. These improvements would included altered intersection approach movements, signal phase timings, geometric design, and signal coordination plans at the intersections. Due to the project costs for these improvements, these have been identified as immediate, short-range, and long-range projects.

Immediate

The immediate Zoo/Westdale/I-235 intersection improvements are ones that could be implemented this year under the existing operation budgets. These include ones to modify intersection approach movements and modify traffic signal phasing plans. Listed below improvements, which were identified in the study report that would effectively improve traffic operations at the intersection.

1. Restrict through and left-turn movements on the Westdale approach.
2. Modify the traffic signal phasing to shorten the phase time on Zoo by 20 seconds.
3. Add additional green phase time for the I-235 approach.

Short-term/Low Cost Improvements

The recommended short-range improvements are relatively low-cost alternatives that may have significant impact on the intersection operations. Since the cost of these improvements is under \$200,000 they could be considered within a 3-5 year period without detrimentally impacting the city's Capital Improvement Plan. The ones identified in the study report are the minor street and ramp improvement projects listed below.

1. Widen the Westdale approach to construct a dual right-turn lane
2. Widen the I-235 off-ramp to extend the dual left-turn lanes
3. Remove a portion of the center island along Zoo to relocate the northbound left-turn and provide an additional through-lane at the intersection.
4. Install a hard-wire signalization interconnect along Zoo from the I-235 interchange ramps to 13th Street.

Long-term improvements

The long-term improvements include higher-cost alternatives that involve major construction along both Zoo and the I-235 off-ramps. These projects may be needed if the traffic flow and congestion along Zoo significantly increases. It should be noted that other major facility street projects programmed in the City's Capital Improvement plan, such as the 25th Street Floodway Bridge project, may have significant impact in reducing traffic problems at the Zoo/Westdale/I-235 intersection.

Costs for these projects would be between \$500,000 and \$5,000,000 to extend new lanes and off-ramp facilities along both Zoo and the I-235 ramps. **Due to the cost and impact of the long-range alternatives, these would need to be further reviewed with input from the Kansas Department of Transportation.** These long-term projects would include the following.

1. Construct a new one- or two-lane northbound "bypass" along Zoo from 13th Street to 21st Street along the existing K&O right-of-way
2. Construct a new southbound I-235 off-ramp on the northeast quadrant of the interchange
3. Construct a new southbound Zoo through lane from the south I-235 off-ramp facility to 13th Street.